AUTHOR INDEX

Alberghina, M., 563
Aloe, L., 455
Altiok, N., 209
Amano, T., 251
Angenstein, F., 403
Anthony, N. M., 215
Araki, K., 91
Arendt, T., 381
Ashall, F., 527
Atlasovich, F. M., 237

Bachelard, H. S., 375
Bacia, A., 455
Beani, L., 15
Beckmann, R., 409
Benishin, C. G., 1
Benner, E. A., 215
Bianchi, C., 15
Bigl, V., 307, 381
Bothmer, J., 223
Brooks, K. J., 375
Brown, M. R., 177
Brückner, M. K., 381
Brzin, M., 415
Buchner, K., 409
Bullock, S., 343
Burke, M., 351
Butcher, L. L., 429

Carminatti, H., 281
Charrière-Bertrand, C., 535
Chazot, P. L., 159
Chikuma, T., 153
Chuang, D.-M., 293, 573
Clement, H.-W., 7
Colbran, R. J., 469
Crne-Finderle, N., 415
Cuello, A. C., 543

De Block, J., 203
De Meester, I., 203
De Potter, W. P., 203
Desjardins, P., 21
Diebler, M. F., 83
Diksic, M., 513
Djamgoz, M. B. A., 527
Dohi, T., 259
Doucet, J., 21
Duchemin, A.-M., 275
Dykes, R. W., 313

Earley, B., 351
Ebadi, M., 555
Edwards, E., 29
Edwards, R. H., 429
Eglen, R. M., 69
Eisenhofer, G., 37
Ermacora, M. R., 237
Esler, M. D., 37

Ferraro, L., 15
Fitzpatrick, P. F., 191
Floyd, D. N., 527
Fredholm, B. B., 209
Furune, Y., 99
Fusco, M., 455

Gackenheimer, S. L., 45
Galarza De Bo, E. R., 237
Gauthier, D., 21
Gehlert, D. R., 45, 581
Gemsa, D., 7
Giglioni, A., 367
Goiny, M., 543
Gould, R. M., 563
Gradkowska, M., 455
Grdiša, M., 513
Gudehithlu, K. P., 275
Guiramand, J., 229
Guzman-Godinez, G., 447

Hadjiconstantinou, M., 275
Hanai, K., 397
Hanaoka, K., 153
Hanisch, U.-K., 313
Hayashi, S., 91
Henn, F. A., 29
Hernandez-R., J., 119
Hexum, T. D., 521
Higuchi, H., 185
Hilbert, R., 409
Hucho, F., 409
Huff, A., 555
Huxtable, R. J., 109

Iino, T., 243
Ikegami, Y., 75

Jolles, J., 223

Kalfayan, V., 69
Kasa, P., 129
Katagiri, T., 91
Kataoka, K., 337
Kato, T., 99, 153
Katsura, M., 243
Keith, T. J., 177
Klinkhachorn, P., 269
Knull, H. R., 177
Konat, G. W., 171
Konat, G., 269
Kornrich, W., 29
Kreda, S. M., 287
Krohn, K., 313
Kumanishi, T., 91
Kumegawa, M., 153
Kuriyama, K., 243
Kurosawa, M., 423
Kuwano, R., 91

Lange, M., 381
Leon, A., 455
Leonard, B. E., 351
Lin, W.-W., 293, 573
Lleu, P.-L., 109

de Mattos, A. G., 595
Markerink, M., 223
Matsuda, Y., 549
Matthies Jr, H., 403
Maysinger, D., 543
McClelland, D. L., 69
McGeer, E. G., 197
McGeer, P. L., 197
Meguri, H., 135
Mercado, R., 119
Meyer, M. M., 191
Miki, N., 185
Minami, N., 259
Minoshima, S., 91
Misaki, N., 185
Mitani, A., 337
Morii, K., 91
Morita, K., 259

Nagai, Y., 549
Nakata, Y., 75
Neff, N. H., 275
Nishio, H., 75
Nunes, J. L., 69
Nunez, J., 535

Ochiai, O., 153
Oderfeld-Nowak, B., 455
Ogita, K., 135
Oh, J. D., 429
Ohgaki, T., 135
Ohkawara, A., 135
Ohtsuki, H., 259
Okabe, N., 251
Oomura, Y., 337, 397
Osborne, N. N., 329
Otsu, Y., 99
Otto, H., 409

Pakaski, M., 129
Pasquini, J. M., 237, 287
Paz, M. M., 595
Pessoa-Pureur, R., 595
Pfeiffer, R. F., 555
Piccardo, P., 543
Pitto, M., 367

Quack, G., 329

Rauh, J. J., 215
Recasens, M., 229
Reymann, K. G., 403
Roghani, A., 429
Rose, S. P. R., 343

Rosenkranz, R. P., 69
Rossi, S., 281
Rothe, T., 313
Royland, J. E., 171
Royland, J., 269
Rubin, M. A., 595

Saito, N., 499
Santome, J. A., 237
Sasaki, K., 397
Sassetti, I., 229
Sato, A., 423
Sato, Y., 423
Sattelle, D. B., 215
Savoie, C., 21
Scharpé, S., 203
Schliebs, R., 447
Schober, D. A., 45
Schoepp, D. D., 581
Scholey, A. B., 343
Segawa, T., 75
Sharif, N. A., 69
Shimizu, N., 91
Silvia, C. P., 275
Sketelj, J., 415
Smolich, J. J., 37
Soto, E. F., 237, 287
Staak, S., 403
Staeck, S., 403
Strange, P. G., 159
Suemitsu, T., 259
Suzuki, K., 397
Suzuki, T., 135

Takada, A., 513
Takahashi, Y., 91
Takeda, K., 153
Tanaka, C., 499
Tanganelli, S., 15
Tasca, C. I., 595
Tettamanti, G., 367
Torea, J. H., 237
Tsuji, S., 549
Tsujimoto, A., 259

Uchida, S., 135
Usui, H., 91
Valente, G. B., 595
Van Houtten, P., 29
Vanhoof, G., 203
Vantini, G., 455
Vargas, V. I., 281
Vesin, M.-F., 585
Vignes, M., 229

Wesemann, W., 7
Whiting, R. L., 69
Wiggins, R. C., 171, 369
Wong, P. T.-H., 197
Woolf, N. J., 429

Yagi, H., 397
Yajima, R., 153
Yamagata, K., 185
Yamakuni, T., 251
Yamamoto, T., 99, 251, 549
Yanase, H., 337
Yoneda, Y., 135

Zhu, J., 521

SUBJECT INDEX

acetylcholine release - and grafting of cells, 543
- effect of cutaneous mechanical sensory stimulation, 423
- sensory stimulation, 423
acetylcholine transport - effect of vesamicol, 83
- into synaptic vesicles, 83
acetylcholine - concentrations in cortex, 544
- in hippocampus following ischaemia, 243
acetylcholinesterase activity - in endothelial cells, 129
- influenced by glial cells, 129
acetylcholinesterase - effect of denervation, 415
- in muscles, 415
- molecular forms, 381, 415
- in Alzheimer's disease and embryonic development, 381
acid fibroblast growth factor - delays ischemia-induced intracellular calcium elevation, 337
- possible involvement in neuroprotection, 337
- prevents cell death, 397
acyltransferase activity - in squid axoplasm, 563
ADP - and rise in intracellular Ca^{++}, 75
adrenal chromaffin cells - catecholamine release, 259
adrenal medulla - aminopeptidase P, 203
age-related phosphatidic and polyphosphoinositide formation, 223
alcohols - differential effect on synthesis of metallothionein, 555
Alzheimer's disease - acetylcholinesterase and butyrylcholinesterase levels, 381
- prostaglandin synthesis, 197
amino acids - in hippocampus following ischemia, 243
aminopeptidase P - in bovine adrenal medulla, 203
anistoropy, 7
aromatic L-amino acid decarboxylase - cloned, 275
- expression in oocytes, 275
astrocytes - bradykinin receptors, 573
- secrete nerve growth-factor-like molecules, 455
autoradiographical - localisation of NPY receptors, 45
autoradiography - of ^{3}H-QNB binding, 313

binding - of ^{3}H-QNB, 313
blood/brain barrier - transfer of tryptophan, 513
- transport of α-methyl-L-tryptophan, 513
bradykinin receptors - on astrocytes, 573
- activation of protein kinase C, 573
bradykinin - effects in D34 astrocytoma cells, 209
- induces phosphoinositide turnover, 573
- inhibits cAMP, 209
brain damage - effect of Trimethyltin, 351
brain polysome-cytomatrix complexes, 21
[^{35}S]t-butylbicyclophosphorothionate binding - in house flies, 215
butylcholinesterase - molecular forms, 381
butyrylcholinesterase - in Alzheimer's disease and embryonic development, 381

calcium channel blockers - effect on dopamine release, 99
calcium elevation - in ischaemia, 337
calcium entry - and muscarinic receptors, 259
calcium ionophores - potentiate endothelin-induced stimulation of inositol phosphate, 243
calcium mobilisation - and muscarinic receptors, 259
calcium -measurement of intracellular levels, 75
calcium/calmodulin dependent protein kinase 11 - regulation and roles, 469
cAMP - in D384 astrocytoma cells, 209
- inhibition by bradykinin, 209

catecholamine release - from chromaffin cells, 259
- muscarinic receptor-induced, 259
cell death - prevented by aFGF, 397
cerebral ischemia - effect on acetylcholine and amino acids, 243
cGMP - in D384 astrocytoma cells, 209
chloramphenicol acetyltransferase assay - neuropeptide Y fusion plasmids, 185
choline uptake - effect of ginsenoside Rb_1, 1
cholinergic markers - effect of kainic acid, 447
cholinergic neurones - revealed by choline-o-acetyl transferase immunocytochemistry, 429
- revealed by in situ hybridization, 429
cholinergic receptors - binding studies, 313
cholinergic receptors - in somatosensory cortex, 313
choline-o-acetylcholinesterase immunohistochemistry - of cholinergic neurones, 429
circadian rhythms - of membrane anistoropy, 7
cocaine - influence on dopamine uptake, 521
cortex - release of 5-HT, 7
cutaneous mechanical sensory stimulation - acetylcholine release, 423
cyclic AMP - see cAMP
cyclic GMP - see cGMP
cyclodiene - resistant house flies, 215
cytoskeletal proteins - nonenzymatic incorporation of sugars, 177

D_2 dopamine receptor - genes, structure and expression, 91
D384 astrocytoma cells, 209
denervation - effect on acetylcholinesterase, 415
depression - animal model, 29
developing brain - expression of tubulin, Tau and MAPS 2, 535
development - of fatty acid-binding protein, 237
- of mannose incorporation into proteins, 281
- of myelin, 269
- of synaptosomal taurine content, 109
N,N'-dicyclohexylcarbodiimide - effect on vesamicol binding, 83
dihydroxyphenylalanine (DOPA) - and cardiac production, 37
- increased during sympathetic stimulation, 37
dithiotreitol - inhibits metabobotropic responses of glutamate, 229
dopamine D_2 receptors - binding of ^{3}H-spiperone, 163
- molecular characterisation, 159
- of human and rat, 91
- of pituitary gland, 159
- structure, expression and genes, 91
dopamine release - measured by microdialysis, 99
- caused by calcium channel blockers, 99
dopamine transporters - labelled with ^{3}H-GBR12935, 69
- binding of ^{3}H-WIN 35,428, 581
- influence of quinolinic acid lesions, 581
dopamine uptake - effect of cocaine, 521
- in PC12 cells, 521
dopamine-dependent increase in glycoprotein fucosylation, 403

endothelial cells - acetylcholinesterase activity, 129
- subcultural and glial cells, 129
endothelin - induces phosphoinositide turnover, 293
epidural cups - use for GABA release studies, 15
exopeptidase - aminopeptidase P, 203
expression - of dopamine D_2 receptors, 91

fatty acid-binding protein - during development, 237
fluorescence digital image analysis - of intracellular Ca^{++}, 75
GABA release, 15
GABA - drug effects on metabolism and receptors, 15
galactose - nonenzymatic incorporation intoproteins, 177
ganglioside GQlb - effect inhibited by K-252b, 549
- involvement in neuritogenesis, 549
- stimulates phosphorylation, 549
GBR12935 - labels dopamine transporters, 69
- binding in brain and kidney, 69

gene - of NPY, 185
genes - of dopamine D_2 receptors, 91
genetically modified cells - grafting, 543
ginsenoside Rb_1 - actions on choline uptake, 1
glia - role in mannose incorporation into optic lobe protein,281
glial cells - affect acetylcholinesterase activity, 129
- Na^+/K^+-ATPase, 119
- subcultured with endothelial cells, 129
glucocorticoid responsive elements - in rat NPY gene, 185
glucose - nonenzymatic incorporation into proteins, 177
glutamate metabotropic effects - inhibited by dithiotreitol, 229
glutamate metabotropic responses - in synaptoneurosomes, 229
glycoprotein fucolysation - and long-term potentiation, 403
glycosignalling system, 549
grafting - of cells, 543
granule cells - localisation of Sialidase, 267
GTP-binding proteins, 409

hippocampus - release of 5-HT, 7
5-HT receptor subtypes - circadian and seasonal rhythms, 7
5-HT release, 7
5-HT - effect on NA^+/K^+-ATPase, 119
ifenprodil - effect on NMDA receptor ionophore complex, 135
in situ hybridization histochemistry - to reveal cholinergic neurones, 429
inositol phosphates - stimulated by memantine, 329
inositol triphosphate - calcium mobilisation, 259
intracellular Ca^{++} - in single blood platelets, 75
ischaemia - cell death prevented by aFGF, 397
- protection caused by acid fibroblast growth factor, 337
- effect on acetylcholine and amino acids, 243
- effects on hippocampus, 243
- intracellular calcium elevation, 337

kainic acid - effect on cholinergic markers, 447
K-252b - inhibitor of ganglioside GQlb effects, 549

learning - involvement of α-tubulin immunoreactivity, 343
lithium treatment - effect on transport of α-methyl-L-tryptophan, 513
- effect on transport of tryptophan, 513
Loligo peali - phospholipase A_2 and acetyltransferase activities in axoplasm, 563
long-term potentiation - increases protein synthesis and glycoprotein fucosylation, 403

malnourishment - influence on phospholipid incorporation into oligodendroglial cells, 287
malnutrition - influence on tubulin, 595
MAPS - in developing brain, 535
memantine - stimulates inositol phosphates and antagonises NMDA effects, 329
membrane anistoropy - circadian and seasonal rhythms, 7
metabotropic responses of glutamate -inhibited by dithiotreitol, 229
metallothionein - mRNA and synthesis, 555
- synthesis, 555
- effect of different alcohols, 555
methylation - of phospholipid, 109
α-methyl-L-tryptophan - transport across blood/brain barrier, 513
N-methyl-D-aspartate (NMDA) complex - effect of ifenprodil, 135
NMDA-induced destruction of neurones - nullified by memantine, 329
microdialysis - of dopamine release, 99
microtubule associated protein 2 - see MAPS 2,535
mRNA - of metallothionein, 555
- of protein kinase C, 503
- to tubulin, Tau and MAPS 2, 537
muscarinic - receptor binding, 313
muscarinic receptor - mediated catecholamine release, 259
muscle cell line, G8-1 - production of nerve growth factor, 251
myelin development - effect of undernourishment, 269
myelin isolation - by flotation technique, 171
myelin isolation - by sedimentation technique, 171

Na^+/K^+-ATPase - in glial cells, 119
Na+/K^+-ATPase - influenced by 5-HT, 119
nerve growth factor - modulates neuroplasticity, 543
- produced in muscle cell line, G8-1, 251
nerve growth factor-like immunoreactivity, 455
nerve growth factor-like molecules - released from astrocytes, 455
neuritogenesis - promoted by ganglioside GQlb, 549
neuropeptide Y gene, 185
- glucocorticoid responsive elements, 185
neuropeptide Y receptors - autoradiography, 45
neuropeptide Y (NPY) - in the CNS - 185
- chloramphenicol acetyltransferase assay, 185
[Leu^{31}-Pro^{34}]neuropeptide Y - identifies a subtype of neuropeptide Y receptors, 45
neuroplasticity - of NGF, 543
neuroprotection - involvement of acid fibroblast growth factor, 337
neurotransmitter release - in an animal model of depression, 24
- in vitro, 29

'H-NMR spectroscopy, 375
^{31}P-NMR spectroscopy, 375
nonenzymatic - incorporation of sugars into proteins, 177
noradrenaline - turnover, 37

oligodendroglial cells - phospholipid composition, 287
optic lobe protein - incorporation of mannose, 281

passive avoidance learning - in chick, 343
peptidylglycine-amidating monooxygenase (PAM), 153
pH - intracellular level in cortex slices, 375
phosphatidic acid - distribution and effect of age, 223
- formation in broken cells preparations, 223

phosphoinositide turnover - induced by bradykinin, 573
- induced by endothelin, 293
phosphoinositide turnover - induced by bradykinin, 573
- induced by endothelin, 293
phospholipase A_2 activity - in squid axoplasm, 563
phospholipid methylation, 109
phospholipid - composition of oligodendroglial cells, 287
pirenzepine binding, 313
pituitary gland - dopamine D_2 receptors, 159
platelets - measurements of intracellular Ca^{++}, 75
polyphosphoinositide - formation in broken cell preparation, 223
polyribosome-cytomatrix complexes - islated from brain, 21
potassium chloride - inhibits endothelin-induced stimulation of inositol phosphates, 293
poyphosphoinositide - distribution and effect of age, 223
prostaglandin D_2 - in spinal cord and meninges, 585
prostaglandin E_2 - in spinal cord and meninges, 585
prostaglandin synthesis - in Alzheimer's disease, 197
prostanoid - unusual type in spinal cord and meninges, 585
protease activities - in retina, 527
protein kinase C - activated by bradykinin, 573
- different subspecies, 499
- in different subspecies, 499
- localisation, 499
- mRNAs, 503
protein synthesis - and long-term potentiation, 403

QNB binding, 313
quantitative autoradiography - of NPY receptors, 58
quinolinic acid lesions - effect on ^{3}H-WIN 35,428 binding, 581
quinolinic acid - effect on dopamine transporter, 581

retina - protease activities, 527

salivary glands - PAM activity, 153
sciatic nerve transection - cholinergic receptors, 313
seasonal rhythms - of 5-HT receptors, 7
seasonal rhythms - of membrane anistoropy, 7
sensory stimulation - acetylcholine release, 423
serum - influence on mannose incorpoation into proteins, 281
sialidase - in cultured granule cells, 367
- subcellular localisation, 367
somatosensory cortex - cholinergic receptors, 313
spiperone binding - to D_2 dopamine receptors, 160
subspecies - of protein kinase C, 499
sympathetic stimulation - elevates cardiac DOPA levels, 37
synaptic vesicles - acetylcholine transport, 83
synaptoneurosomes - glutamate metabotropic responses, 229
synaptosomal content - of taurine, 109
synaptosomes - from developing rat, 109

tau - in developing brain, 535
taurine content - and phospholipid methylation, 109
- of synaptosomes, 109
thrombin - and rise in intracellular Ca^{++}, 75
transporter - of dopamine, 581
trimethyltin - behavioural effects, 351
- biochemical effect, 351
- histological effects, 351
- induces brain damage, 351
α-tubulin immunoreactivity - in learning, 343
tubulin - in developing brain, 535
- influenced by malnutrition, 595
tyrosine hydroxylase substrates, 191
tyrosine hydroxylase - inhibitors, 191

undernourishment - and retardation of brain development, 269

vesamicol bindings - effect of N,N'-dicyclohexylcarbodiimide, 83
vesamicol -an inhibitor of acetylcholine transport, 83

Xenopus laevis oocytes - expression of aromatic L-amino acid decarboxylase, 275

^{3}H-WIN 35,428 binding - to dopamine transporter, 581

TYPESET IN GREAT BRITAIN BY BPCC-AUP GLASGOW LTD. PRINTED BY BPCC-AUP ABERDEEN LTD